

Medicolegal News and Views

Virginia Department of Health, Office of the Chief Medical Examiner

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Local Medical Examiner Reappointments and Expectations

By Keshia Singleton, State Project Manager

The code of Virginia permits the Chief Medical Examiner to appoint Virginia physicians, physician assistants and nurse practitioners as local medical examiners for their communities for a term of three years.

Caseload, coverage, and participation of the last appointment for local medical examiners were part of the focus of a recent internal audit of the Virginia Medical Examiner system. The audit identified that local medical examiners were not all performing at the same level and the services delivered by some did not meet OCME standards or support the mission. Activity and lack thereof was assessed for each local medical examiner and was the benchmark for consideration of reappointment. Caseload (i.e. the number of external examinations performed) from the past reappointment term was reviewed for each local medical examiner.

The OCME wants to ensure that the district staff is providing the same service to all appointed local medical examiners and that all local medical examiners are providing the same service across the Commonwealth. The OCME developed expectations and outlined criteria required for the local medical examiners to follow. The service expectations include external examinations, optional death scene visits with specialized training provided by OCME staff, and optional cremation reviews. These expectations were shared with all local medical examiners recently within packets that were distributed.

It is the mission of the OCME to provide state of the art, high quality, professional medicolegal death investigation for all citizens of the Commonwealth regardless of their geographic location. The service you provide as a local medical examiner is essential and the support you provide allows all of us to accomplish our mission. Dr. Gormley and I want to personally thank you for your hard work and hope to personally get to know each of you during this new appointment term.

ANNOUNCEMENTS

Upcoming Training & Conferences

American Academy of Forensic Sciences
Seattle, WA
February 19 - 24, 2018

Local Medical Examiner & Death Investigation Conference
Manassas, VA
May 3 - 4, 2018

OCME Scene Training
Spring 2018 - Dates to be announced soon

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Scene Response & Training

By Inv. Bridget Kinnier, F-ABMDI

Throughout the months of August and September of this year, the OCME hosted four special training sessions for Local Medical Examiners and Per Diem Medicolegal Death Investigators. These two-hour training sessions were held at each of the district offices and focused on death scene investigation.

For some, this was their first time receiving hands on training in the area of scene investigation. The course was approved for two hours of

continuing education by the American Board of Medicolegal Death Investigators. Attendees learned about the most up to date death scene investigation techniques and procedures, including scene photography. We also discussed OCME policies and procedures related to death scene investigation, and how they correspond with specific requirements set forth by the National Association of Medical Examiners.

We are excited to continue to offer these training sessions in 2018. Dates will be announced soon. If you are interested in conducting death scene

investigations, please consider registering for one of these four sessions. Registration information will be sent out in the near future.

If you are unable to attend any of these training sessions, but would still like to be trained, please contact me or the Supervisory Investigator of your district office. We are happy to conduct this same training session individually with any Local Medical Examiner or Per Diem Medicolegal Death Investigator.

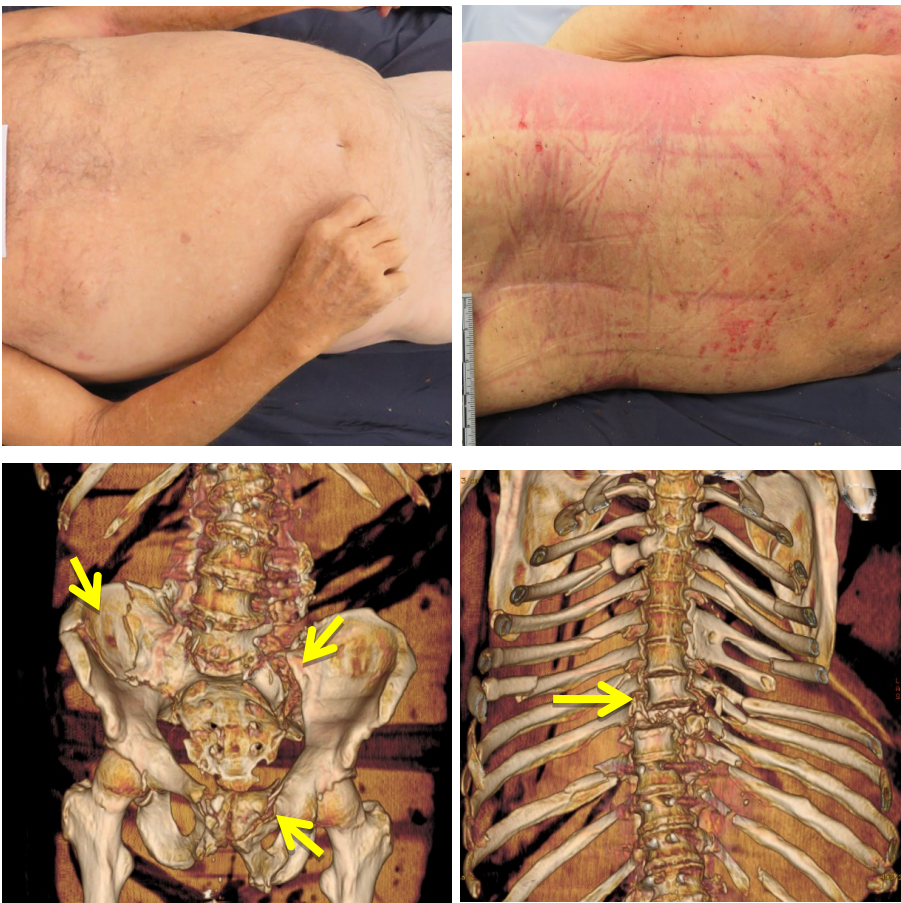
Addition of CT Scanner in Western District OCME

By Sara Ohanessian, MD and Sarah Kingery

A computed tomography (CT) scanner is an imaging modality that has been in use since the 1970s. Historically, CT scanners have been used in hospital settings for diagnostic and therapeutic purposes. Post-mortem CT imaging is becoming more prevalent in forensic autopsy examinations because of its ability to enhance findings from the traditional autopsy. Forensic autopsy applications of the CT scanner include: demonstrating fatal trauma in accidental deaths (especially motor vehicle accidents), allowing *in situ* reconstruction of internal injuries, determining internal trajectory of bullets and fragment locations in firearms related deaths, enhancing anthropological study of remains, detecting internal injuries that may not be easily observed during a standard autopsy, and capturing quality tri-dimensional images that are easy to display in a judicial proceeding. The application of CT imaging in postmortem examinations is also beneficial for the future of forensic medicine because it allows for more complex investigations and consultations to be continued long after the traditional autopsy procedure has been completed. In scenarios where religious or cultural objections to postmortem examinations arise, the CT scanner may also be a vital alternative method of examination.

Following the renovation of the Department of Forensic Science Western Laboratory and the Western District of the

Office of the Chief Medical Examiner, a GE Optima CT scanner was installed and is currently being operated and maintained by morgue staff. Beginning in February of 2017, CT scans have been performed as part of the postmortem examination of over 130 cases. A record of these cases has been maintained during this time frame indicating which cases were chosen to undergo a CT scan and why, the findings from the scan, and the important supplemental question, "Were we able to avoid performing a full autopsy based on the findings from the CT scan?", (yes or no) which is answered in accordance with the opinion of the staffing pathologist. In approximately six months of utilization of this new technology, our "autopsy avoided rate" is approximately 35%. This means that of the cases that were chosen to undergo CT analysis, 35% were able to be viewed externally. Without the evidence provided by the CT scanner imaging, these cases would have required a full autopsy. This figure does not include cases in which obvious external fatal injuries were present. The CT imaging frequently revealed extensive, potentially fatal internal injuries that may have otherwise been undocumented if an external examination only had been performed. The most frequent notable traumatic findings in these instances include scapular, pelvic, and vertebral fractures.



External examination photographs. Anterior and posterior torso. **CT scan images.** Extensive pelvic fractures; Bilateral posterior rib fractures and thoracic vertebral column fracture dislocation.

One example (see images below) involved the external examination performed on a man found unresponsive next to a tractor. There were no obvious external fatal injuries so natural death was initially suspected. However, after a CT scan was performed on this decedent and the images were viewed in the form of a 3D bone reconstruction, much more severe, specific, non-palpable internal injuries were revealed. After viewing the CT images an external view was performed on this decedent with the resulting cause of death determined to be "blunt force trauma of the torso" with a manner of death of "accident".

The addition of a CT scanner to our district has quickly become a vital tool in evaluating the internal condition of decedents pre-autopsy, which has saved us considerable amounts of time and manpower. This technology allows the forensic pathologists to detect injuries that are difficult to find externally and also adds significant details to the examination of these injuries for more thorough documentation. Moving forward for statistical purposes, we will continue to note the cases in which an autopsy was avoided by the CT imaging, and additionally, when CT imaging revealed significant details of injuries, that would have otherwise gone unnoticed- a percentage we expect to be quite high.

A suicide involving multiple gunshot wounds: Importance of correlation of thorough scene investigation and autopsy findings in determining manner of death

By Meghan Kessler, DO and Inv. Phinon Beckham

Single gunshot wound suicides are a common type of case in any medical examiner's office. We discuss a case in which the importance of scene investigation and correlation to autopsy findings are essential. Police initially reported the apparent suicide of a 67-year-old White male, found deceased in a recliner at home, from what appeared to be a single, perforating gunshot wound of the head. The decedent lived in hoarder conditions and had been depressed over having to clean and sell his home. At autopsy, the decedent was found to have five gunshot wound paths to include a wound of the head, two of the abdomen, one of the right thumb, and one of the right forearm, each with distinctive patterns of close/contact range gun fire. The injuries of the abdomen and extremity would not have been initially fatal. Police re-evaluated the scene. A black .357 revolver was discovered on an adjacent couch with one spent casing, and was partially under a blanket, as if tossed. A silver .357 revolver with blood on it was at the decedent's hip. This revolver had two spent casings, and the cylinder was rotated in a direction counter to the rotational mechanism with one of the spent casings in the active chamber, thus indicating the gun was loaded one bullet at a time. A box of Remington .357 Magnum ammunition was located next to the decedent with blood on the inside and outside. From comparison of scene findings to autopsy findings, it is postulated that the decedent attempted to use the revolver found on the couch, shot himself once in the abdomen and when the result was a nonfatal, painful injury, he tossed it onto the couch. The decedent then loaded one round into the other revolver, as he is doing this it fired, creating the superficial wound paths of his upper abdomen, right thumb, and right forearm. Distinctive patterns of soot and stippling and precise locations of the wounds, made it probable that these three wound paths are the result of a single bullet trajectory. The decedent loaded another round, this time, inflicting a contact gunshot wound to the head, which after exiting, struck the ceiling and dropped plaster onto the final scene including onto the gun on the couch. This is a case in which a complete scene review and comparison of autopsy findings are vital in determining manner of death.

OCME District News

Please welcome our new staff members at the OCME.

Central District

Several new staff have come to Richmond. Dr. Jeffery Gofton returned to Virginia in August 2016. He is an Assistant Chief Medical Examiner for the Central Office. Allison Clevenger joined the Surveillance Team as the Infant and Child Death Projects Coordinator for the State Child Fatality Review Team. The administrative team welcomed four new staff, Amanda Clemons, LaKeshia Johnson, Joan Buchanan, and Melinda Tobey. Anna Middleton joined the Virginia State Anatomical Program Team as an administrative assistant. Cody Glick joined the morgue security team. Elaine Schwenk is the new Histologist for the Central District. Marissa Carvalho accepted a full time investigator position at Central, transitioning from a part-time position. Leslie Steiger and Shanta Peavy joined the investi-

gator team as well.

Northern District

The office welcomed Jennifer Starkey as the new District Administrator for the Northern office. She replaced Nancy Bull, who left the OCME in April 2017. There are two new Assistant Chief Medical Examiners in the Northern office; Dr. Meghan Kessler and Dr. Carmen Coles. Lauren Silver joined the team of medicolegal death investigators in June 2017.

Tidewater District

The Tidewater District welcomed Dr. Michael Hays to their team in July, 2017. Doctor Hays completed his undergraduate studies at the West Virginia University graduating with a B.S. in Biology and a B.A. in Chemistry. Receiving his Doctor of Medicine at the West Virginia University School of Medicine in 2011, Doctor Hays followed with a pathology residency at the University of Virginia. After completing

a 2-year Neuropathology fellowship at UVA, Doctor Hays completed his forensic pathology fellowship in the Central District of the Virginia Office of the Chief Medical Examiner. Alison Bybee and Megan Waters joined the investigator team this past year. Brandy Magruder is the new Forensic Autopsy Technician Supervisor and joined the Autopsy Technician team in June 2017.

Western District

The office welcomed Dr. Sara Ohanessian in August 2016. She is the newest addition to the Assistant Chief Medical Examiners in the Western District Office. Lucy Hochstein accepted an investigator position. Jarrod Meader recently accepted the Sr. Autopsy Technician position.

Please stop by your district office to say hi to the new staff if you're ever in the area.



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Local Medical Examiner Conference Information, Recent & Upcoming

The Virginia Office of the Chief Medical Examiner hosted another Conference in Roanoke in October.

The two-day event consisted of lectures on the use of CT in Forensics, Interesting Drug Cases, History of Opioids and Where It's Going, Gangs & Awareness of Gangs in your community, Forensic Anthropology, Industrial Accidents and Asphyxial Deaths.

The next conference will be held in Manassas, Virginia with a tentative date scheduled for May 3-4, 2018. We are currently in the planning phase for the conference. If you have any suggestions for topics for the conference, please reach out

to me as soon as you can. I would really like to hear your suggestions on topics.

More information to come on the upcoming conference for May after the new year.

Mission of the OCME:

Provide state of the art, high quality, professional medicolegal death investigation for all citizens of the Commonwealth regardless of their geographic location.

A BIG Thank You!

The OCME thanks you for your everything that you do! Local Medical Examiners perform a very important service to the citizens who reside in their locality. We appreciate you!

FROM THE EDITOR

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<http://www.vdh.virginia.gov/medical-examiner/>

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Comments, suggestions and questions are welcome.